

STUDIES IN THE COMPOSITAE-EUPATORIEAE, XI. TYPIFICATION OF GENERA

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This paper constitutes the first step in a plan to revise the genera of the tribe Eupatorieae. Recent work in the tribe has indicated numerous unnatural generic concepts and revealed a number of possibly undescribed genera. In a few cases it has been possible to describe new genera with review of limited complexes within the tribe (King, 1965, 1967, 1968; King and Robinson, 1966). For proper evaluation of a number of additional elements within the Eupatorieae, however, a complete review of the existing genera of the tribe is necessary. The present treatment does not reflect some taxonomic changes that are known to be necessary. Existing published conclusions are accepted here as given. There has seemed to be little question in the typification of most of the genera, however, in such work it is always possible to overlook previous typification. This information is provided at this time with the hope that such errors will be called to our attention to be incorporated in the final work.

This work has involved the use of the extensive facilities of the National Agriculture Library, the Library of Congress, and the Smithsonian Library in Washington as well as reference to the New York Botanical Garden, Royal Botanic Gardens Kew, and the British Museum (Natural History), and we wish to acknowledge the cooperation of members of the staff of each of these institutions. In addition we wish to thank Mrs. Ida K. Langman and Mrs. Virginia S. Spevak of the Index Nominum Genericorum (Plantarum) for their many helpful suggestions. In the case of certain genera indicated by an asterisk we have not seen the original publication but have relied on Mrs. Langman to supply the information. We wish to thank Drs. John Wurdack, Rogers McVaugh, and Arthur Cronquist for reading and commenting upon earlier versions of the manuscript.

In the text the \equiv sign has been used to indicate concepts that are completely equal being based on the same type. We have followed the practice of considering Necker names illegitimate except when validated by later authors.

Addisonia H. H. Rusby, Bull. Torrey Bot. Club 20: 432. 1893.

T.: *A. virgata* H. H. Rusby

Originally monotypic.

Adenostemma J. R. and G. Forster, Char. Gen. Pl. 89. 1776.

T.: *A. viscosa* J. R. and G. Forster

Originally monotypic.

Adenostyles Cassini, Dict. Sci. Nat. 1, Suppl. 59. 1816

L.T.: *A. viridis* Cassini (\equiv *A. alpina* (Willdenow) Bluff & Fing)

Three species are included in the original citation without any obvious preferences indicated. Other things being about equal, we have selected the most widely distributed species, *A. viridis*, as lectotype. Placed in the tribe Senecioneae on the basis of rather convincing evidence by Toman, Harnatha, and Novotny (1968).

**Adenostylium* Reichenbach, Ic. Fl. Germ. 16: 895. 1853.

Superfluous revised spelling for *Adenostyles* Cassini.

Ageratella A. Gray ex S. Watson, Proc. Am. Acad. 22: 419. 1887.

T.: *Ageratum microphyllum* Schultz-Bipontinus

Originally monotypic.

Ageratina Spach, Hist. Veg. Phan. 10: 286. 1841.

L.T.: *Eupatorium aromaticum* Linnaeus

Three species appear in the original publication. Since no preferences are obvious, we have selected as lectotype a well-known Linnaean species.

Ageratina O. Hoffmann, Engl. Jahrb. 23: 503. 1900.

T.: *A. goetzeana* O. Hoffmann

Originally monotypic. The name is a later homonym of *Ageratina* Spach. See *Ageratinastrum* J. Mattfeld.

Ageratinastrum J. Mattfeld, Notizbl. Bot. Gart. Berlin 11: 412. 1932.

T.: *Ageratina goetzeana* O. Hoffmann

New name for *Ageratina* O. Hoffmann.

Ageratiopsis Schultz-Bipontinus ex Bentham & J. D. Hooker, Gen. Pl. 2: 246. 1873.

T.: *Eupatorium ageratoides* Linnaeus f.

Nom. nud., cited only in synonymy.

Ageratum Linnaeus, Sp. Pl. 2: 839. 1753.

L.T.: *Ageratum conyzoides* Linnaeus

The lectotype species is the first of three listed by Linnaeus. The lectotype is indicated by Cabrera and Vittet (1963) but it may have been specified by earlier authors also.

Agrianthus Martius ex A. P. Decandolle, Prod. 5: 125. 1836.

L.T.: *Agrianthus campestris* Martius ex A. P. Decandolle

The lectotype species was the first cited of the original two of Martius, and the only one of the original species placed in the subgenus *Euagrianthus* by Mattfeld (1923).

Alomia Humboldt, Bonpland and Kunth, Nov. Gen. et Sp. 4: 151. 1820.

T.: *A. ageratoides* Humboldt, Bonpland and Kunth

Originally monotypic.

Amboroa Cabrera, Bol. Soc. Argent. Bot. 6: 91. 1956.

T.: *A. geminata* Cabrera

Originally monotypic.

Ammopursus J. K. Small, Bull. Torrey Bot. Club 51: 392. 1924.

T.: *Lacinaria ohlingerae* S. F. Blake

Originally monotypic.

Anisochaeta A. P. Decandolle, Prod. 5: 109. 1836.

T.: *A. mikanoides* A. P. Decandolle

Originally monotypic. Placed in the tribe Mutisieae by Bentham and Hooker (1873).

Apodocephala Baker, Jour. Linn. Soc. 21: 417. 1885.

T.: *A. pauciflora* Baker

Originally monotypic. Placed in the tribe Vernonieae by Hoffmann (1894) and B. L. Robinson (1906).

Arrojadoa J. Mattfeld, Notizbl. Bot. Gart. Berlin 8: 434. 1923.

T.: *A. praxeloides* J. Mattfeld

Originally monotypic. The name is a later homonym of *Arrojadoa* Britton and Rose of the Cactaceae. See *Arrojadocharis* J. Mattfeld.

Arrojadocharis J. Mattfeld, Notizbl. Bot. Gart. Berlin 10: 1053. 1930.

T.: *Arrojadoa praxeloides* J. Mattfeld

New name for *Arrojadoa* J. Mattfeld.

Aschenbornia Schauer, Linnaea 19: 716. 1847.

T.: *A. heteropoda* Schauer

Originally monotypic.

Ascidiogyne J. Cuatrecasas, Ann. Missouri Bot. Gard. 53: 310. 1965.

T.: *A. wurdackii* J. Cuatrecasas

Originally monotypic.

Barroetea A. Gray, Proc. Am. Acad. 15: 29. 1880.

L.T.: *B. setosa* A. Gray

We have selected as lectotype the first of two species cited by Gray. The other species, *B. subuligera* (Schauer) A. Gray, was cited by Gray only from its description and from one head (capitulum) sent from Berlin.

Batschia Moench, Meth. 567. 1794.

T.: *B. nivea* Moench (\equiv *Eupatorium ageratoides* Linnaeus f.)

Originally monotypic. The name is a homonym of *Batschia* Gmelin, 1791 (Boraginaceae); *Batschia* Mutis ex Thunberg, 1792 (Menispermaceae); and *Batschia* Vahl, 1794 (Leguminosae). See *Ageratina* Spach.

Biolettia E. L. Greene, Pittonia 2: 216. 1891.

T.: *B. riparia* E. L. Greene

Originally monotypic.

Brachyandra R. A. Philippi, Fl. Atac. 34. 1860.

T.: *B. macrogyne* R. A. Philippi

Nom. cons. Originally monotypic.

Brickellia S. Elliott, Sketch Bot. S. Car. and Ga. 2: 290. 1822 ? ("1824").

T.: *B. cordifolia* S. Elliott

Nom. cons. Originally monotypic.

Bulbostylis A. P. Decandolle, Prod. 5: 138. 1836.

L.T.: *Coleosanthus cavanillesii* Cassini (= *Brickellia cavanillesii* (Cassini) A. Gray)

We have selected as lectotype the first of the eleven species cited by Decandolle. The name is a later homonym of *Bulbostylis* Kunth, nom. cons. (Cyperaceae).

Caelestina Cassini, Dict. Sci. Nat. 6, Suppl. 8. 1817.

T.: *C. coerulea* Cassini

Originally monotypic. See *Coelestina* Cassini.

Calostelma D. Don in Sweet, Brit. Flow. Gard. 2: no. 184 p. 2. 1833.

T.: *Staelina elegans* T. Walter

Originally monotypic. The combination in *Calostelma* has never been validly made. The species is presently placed in *Liatris* Gaertner ex Schreber.

Campuloclinium A. P. Decandolle, Prod. 5: 136. 1836.

L.T.: *Eupatorium macrocephalum* Lessing

Barroso (1950), by excluding all others of the original species from the group, accomplished a de facto typification of *Campuloclinium*.

Carelia G. Pontedera ex P. C. Fabricius, Enum. 85. 1759.

L.T.: *Ageratum conyzoides* Linnaeus

Fabricius seems to have been the first to validate this pre-Linnaean name. No species was cited by Fabricius, but *Ageratum* Linnaeus was given as a synonym. The identity of the two genera is reflected in the lectotypification by Britton and Wilson (1925).

Carelia A. L. Jussieu ex Cavanilles, Anal. Cienc. Nat. 6. 1802 (1803).

T.: *C. satureiaefolia* Cavanilles (= *Mikania amara* Willdenow)

Originally monotypic. The name is a later homonym of *Carelia* Fabricius listed above.

Carelia Lessing, Syn. Comp. 156. 1832.

T.: *C. cistifolia* Lessing

Originally monotypic. The name is a later homonym of *Carelia* Fabricius listed above. For new name see *Radlkoferotoma* Kuntze.

Carminatia Mocino ex A. P. Decandolle, Prod. 7: 267. 1838.

T.: *C. tenuiflora* A. P. Decandolle

Originally monotypic.

Carphephorus Cassini, Bull. Soc. Philom. 1816: 198. 1816.

T.: *C. pseudoliatris* Cassini

Originally monotypic.

Carphochaete A. Gray, Mem. Am. Acad. n.s. 4: 65. 1849.

T.: *C. wislizeni* A. Gray

Originally monotypic.

Carterothamnus R. M. King, *Rhodora* 69: 45. 1967.

T.: *C. anomalochaeta* R. M. King

Originally monotypic.

Chone Dulac, *Fl. Hautes Pyr.* 512. 1867.

T.: *C. heterophylla* Dulac

Originally monotypic.

Chromolaena A. P. Decandolle, *Prod.* 5: 133. 1836.

T.: *C. horminoides* A. P. Decandolle

Originally monotypic.

Ciceronia Urban, *Fedde Rep.* 21: 324. 1925.

T.: *C. chaptalioides* Urban

Originally monotypic.

Clavigera A. P. Decandolle, *Prod.* 5: 127. 1836.

L.T.: *C. corymbosa* A. P. Decandolle

Since no other preference is indicated, we have selected as lectotype the first of the three species listed by Decandolle.

Coelestina Cassini, *Bull. Soc. Philom.* 1817: 10. 1817.

L.T.: *Caelestina coerulea* Cassini

No species was included in the original publication. For citation of the later publication see *Caelestina* Cassini. The name *Coelestina* is a later homonym of *Coelestina* J. Hill (*Aster*)

Coleosanthus Cassini, *Bull. Soc. Philom.* 1817: 67. 1817.

L.T.: *C. cavanillesii* Cassini (= *Brickellia cavanillesii* (Cassini) A. Gray)

The original publication included no species. The lectotype was the first species assigned to the genus in subsequent work by Cassini (1818). The name antedates that of *Brickellia*, but the latter is conserved.

Conoclinium A. P. Decandolle, *Prod.* 5: 135. 1836.

L.T.: *Eupatorium coelestinum* Linnaeus

We have chosen as lectotype the first of five species listed by Decandolle.

Corynanthelium Kunze, *Linnaea* 20: 19. 1847.

T.: *C. moronoa* Kunze

Originally monotypic.

Critonia P. Browne, *Civ. Nat. Hist. Jam.* 490. 1756.

T.: *Eupatorium dalea* Linnaeus

Originally monotypic. Browne described the plant on page 314 under the name *Dalea*. The name *Critonia* was given in errata on page 490.

Cronquistia R. M. King, *Brittonia* 20: 11. 1968.

T.: *Stevia pringlei* S. Watson

Originally monotypic.

Decachaeta A. P. Decandolle, *Prod.* 5: 133. 1836.

T.: *D. haenkeana* A. P. Decandolle

Originally monotypic.

Dichaeta Schultz-Bipontinus, *Flora* 33: 419. 1850.

Nom. nud. cited only in synonymy. The name is a later homonym of *Dichae-*

ta Nuttall (*Baeria*). \equiv *Schaetzellia* Schultz-Bipontinus, *nom. illeg.*; \equiv *Macvaughiella* R. M. King and H. Robinson.

Dissothrix A. Gray, Jour. Bot. Kew Gard. Misc. 3: 223. 1851.

T.: *D. gardneri* A. Gray (\equiv *Dissothrix imbricata* (Gardner) B. L. Robinson)
Originally monotypic.

Disynaphia W. J. Hooker and Arnott ex A. P. Decandolle, Prod. 7: 267. 1838.

T.: *D. montevidensis* A. P. Decandolle
Originally monotypic.

Dyscritothamnus B. L. Robinson, Contr. Gray Herb. n.s. 65: 25. 1922.

T.: *D. filifolius* B. L. Robinson
Originally monotypic.

Ellenbergia J. Cuatrecasas, Proc. Biol. Soc. Wash. 77: 142. 1964.

T.: *E. glandulata* J. Cuatrecasas
Originally monotypic.

Eriopappus Loudon, Encyc. Pl. 688. 1839.

Nom. nud. cited only in synonymy. = *Eupatorium paniculatum sensu* Loudon. The name is a later homonym of *Eriopappus* Arnott (*Layia*).

Ethulia Linnaeus, Sp. Pl. ed. 2, 1171. 1763.

L.T.: *E. conyzoides* Linnaeus
The lectotype was the first of two species included in the genus by Linnaeus. Subsequent removal of the second species, *E. sparganophora*, to the genus *Sparganophorus* (see below) has resulted in de facto typification of *Ethulia*. Placed in the tribe Vernonieae by Bentham and Hooker (1873).

Eupatoriastrum J. R. Greenman, Proc. Am. Acad. 39: 93. 1903.

T.: *E. nelsonii* J. R. Greenman
Originally monotypic.

Eupatoriopsis Hieronymus, Beibl. Engl. Bot. Jahrb. 43: 46. 1893.

T.: *E. hoffmanniana* Hieronymus
Originally monotypic.

Eupatorium Linnaeus, Sp. Pl. 2: 836. 1753.

L.T.: *E. cannabinum* Linnaeus
The species is cited as lectotype by Ferris (1960) and Cabrera and Vittet (1963) among others. The earliest such citation we have seen is that of E. L. Greene (1903).

Ferreyrella S. F. Blake, Jour. Wash. Acad. Sci. 47: 407. 1958.

T.: *F. peruviana* S. F. Blake
Originally monotypic.

Fleischmannia Schultz-Bipontinus, Flora 33: 417. 1850.

T.: *F. rhodostyla* Schultz-Bipontinus (= *F. arguta* (Humboldt, Bonpland and Kunth) B. L. Robinson)
Originally monotypic.

Garberia A. Gray, Proc. Acad. Sci. Phila. 379. 1879 (1880).

T.: *Liatris fruticosa* Nuttall

Originally monotypic. New name for *Leptoclinium* (Nuttall) A. Gray.

Gymnocoronis A. P. Decandolle, Prod. 5: 106. 1836.

L.T.: *G. attenuata* A. P. Decandolle

We have selected as lectotype the first of two species listed by Decandolle.

Gyptis (Cassini) Cassini, Dict. Sci. Nat. 16: 10. 1820.

T.: *G. pinnatifida* Cassini

Originally monotypic.

Haberlea Pohl ex Baker in Martius, Fl. Bras. 6(2): 341. 1876.

Nom. nud., cited only in synonymy. = *Eupatorium* sect. *Praxelis* Benthamsensu Baker.

Hartwrightia A. Gray ex S. Watson, Proc. Am. Acad. 23: 264. 1888.

T.: *H. floridana* A. Gray ex S. Watson

Originally monotypic.

Hebeclinium A. P. Decandolle, Prod. 5: 136. 1836.

L.T.: *Eupatorium macrophyllum* Linnaeus

The lectotype species is the first and by far the most common of the three listed by Decandolle.

Helogyne Nuttall, Trans. Am. Phil. Soc. n.s. 7: 449. 1841.

T.: *H. apaloidea* Nuttall

Originally monotypic.

Helogyne Benthams, Bot. Voy. Sulph. 20. 1844.

T.: *H. fasciculata* Benthams

Originally monotypic. The name is a later homonym of *Helogyne* Nuttall (see above). For new name see *Hofmeisteria* Walpers.

Heterolaena Schultz-Bipontinus ex Benthams and J. D. Hooker, Gen. Pl. 2: 245. 1873.

L.T.: *Eupatorium odoratum* Linnaeus

Nom. nud., cited only in synonymy. We have chosen the lectotype to coincide with that of *Osmia* with which the name is considered synonymous.

Hofmeisteria Walpers, Walp. Rep. 6: 106. 1847.

T.: *Helogyne fasciculata* Benthams

New name for *Helogyne* Benthams.

Homogyne Cassini, Bull. Soc. Philom. 1816: 198. 1816.

L.T.: *Tussilago alpina* Linnaeus

Of the three original species, *Homogyne alpina* (Linnaeus) Cassini was considered especially representative by Cassini, and has been called the type by Greene (1905). Placed in the tribe Senecioneae by Benthams and Hooker (1873).

Ismaria Rafinesque, Sylva Tellur. 117. 1838.

T.: *I. glandulosa* Rafinesque

Originally monotypic. Superfluous new name for *Rosalesia* La Llave.

Isocarpha R. Brown, Trans. Linn. Soc. 12: 110. 1817.

T.: *Calea oppositifolia* Linnaeus

Originally monotypic. Placed in the tribe Helianthoideae by Bentham and Hooker (1873).

Jaliscoa S. Watson, Proc. Am. Acad. 25: 153. 1890.

T.: *J. pringlei* S. Watson

Originally monotypic.

Kahiria P. Forskal, Fl. Aegypt Arab. 153. 1775.

No species listed with description. Placed in the tribe Vernonieae by Bentham and Hooker (1873) as a synonym of *Ethulia conyzoides* Linnaeus.

Kallophyllon Pohl ex Baker in Martius, Fl. Bras. 6(2): 365. 1876.

Based on *K. crenatum* Pohl and *K. ovatum* Pohl, *nom. nud.*

Nom. nud., cited only in synonymy. \equiv *Symphyopappus* Turczaninow.

Kanimia G. Gardner, Lond. Jour. Bot. 6: 446. 1847.

L.T.: *Mikania strobilifera* G. Gardner

We have selected as lectotype the second listed but older species of the two included by Gardner. The other species, *K. palustris* G. Gardner, was described new with the genus.

Kuhnia Linnaeus, Sp. Pl. ed. 2. 1662. 1763.

T.: *K. eupatorioides* Linnaeus

Originally monotypic.

Kyrstenia Necker ex E. L. Greene, Leaf. Bot. Obs. Crit. 1: 8. 1903.

L.T.: *Eupatorium aromaticum* Linnaeus

We have selected as lectotype the first of the two species considered as typical by Greene.

Lacinaria J. Hill, Veg. Syst. 4: 49. 1772.

L.T.: *Serratula squarrosa* Linnaeus

The genus originally included two species. The lectotypification has been credited to Britton and Brown (Jones, 1950), and coincides with the type of *Liatris* Gaertner ex Schreber. The genus name antedates that of *Liatris*, but the latter is conserved.

Lavenia Swartz, Prod. Veg. Ind. Occ. 112. 1788.

L.T.: *L. erecta* Swartz

We have selected as lectotype the second of two species listed by Swartz. This is selected since Swartz obviously derived the generic name from *Verbesina lavenia* Linnaeus which he cited as a synonym of *Lavenia erecta*.

**Leighia* Scopoli, Introd. 128. 1777.

No species cited with description. = *Ethulia conyzoides* Linnaeus which is placed in the tribe Vernonieae by Bentham and Hooker (1873).

Lepidesmia Klatt, Bull. Herb. Boiss. 4: 479. 1896.

T.: *L. squarrosa* Klatt

Originally monotypic. Placed in the tribe Heliantheae by B. L. Robinson (1911).

Leptoclinium (Gardner) Bentham in Bentham and J. D. Hooker, Gen. Pl. 2: 244. 1873.

T.: *Liatris* (*Leptoclinium*) *brasiliensis* Gardner

Originally monotypic.

Leptoclinium (Nuttall) A. Gray, Proc. Am. Acad. 15: 48. 1879.

T.: *Liatris* (*Leptoclinium*) *fruticosa* Nuttall

Originally monotypic. The name is a later homonym of *Leptoclinium* (Gardner) Benth listed above. The Gardner use of the subgeneric name *Leptoclinium* was intended as an extension of the original concept of Nuttall. The elevation to generic rank by Benth on the basis of Gardner's species, however, antedated the similar action of Gray. For new name see *Garberia* A. Gray.

**Leto* R. A. Philippi, Anal. Mus. Nac. Chile 33. 1891.

T.: *L. tenuifolia* R. A. Philippi

Originally monotypic. Considered a synonym of *Brachyandra* R. A. Philippi, an earlier and conserved name.

Liatris J. Gaertner ex Schreber, Gen. 2: 542. 1791.

T.: *Serratula squarrosa* Linnaeus

Nom cons. The authorship of the combination *Liatris squarrosa* is credited to A. Michaux.

Litrisa J. K. Small, Bull. Torrey Bot. Club 1: 392. 1924.

T.: *L. carnososa* J. K. Small

Originally monotypic.

Lomatozoma Baker in Martius, Fl. Bras. 6: 198. 1876.

T.: *L. artemisiaefolia* Baker in Martius

Originally monotypic.

Lycapsus R. A. Philippi, Bot. Zeit. 28 (1): 499. 1870.

T.: *L. tenuifolius* R. A. Philippi

Originally monotypic.

Macvaughiella R. M. King and H. Robinson, Sida 3: 282. 1968.

T.: *Schaetzellia mexicana* Schultz-Bipontinus

New name for *Schaetzellia* Schultz-Bipontinus

Mallinoa Coulter, Bot. Gaz. 20: 47. 1895.

T.: *M. corymbosa* Coulter

Originally monotypic. Placed provisionally in the tribe Inuleae by Coulter.

Malperia S. Watson, Proc. Am. Acad. 24: 54. 1889.

T.: *M. tenuis* S. Watson

Originally monotypic.

Margacola Buckley, Proc. Acad. Sci. Phila. 1861 [v. 13]: 457. 1862.

T.: *M. parvula* Buckley (= *Trichocoronis wrightii* A. Gray)

Originally monotypic.

Mexianthus B. L. Robinson, Contr. Gray Herb. n.s. 29: 5. 1925.

T.: *M. mexicanus* B. L. Robinson

Originally monotypic.

Mikania Willdenow in Linnaeus, Sp. Pl. (ed. 4) 3(3): 1742. 1803.

- L.T.: *Eupatorium scandens* Linnaeus, *typ. cons.*
Nom. cons. *Eupatorium hastatum* Linnaeus has been cited as type by Britton and Brown (Jones, 1960) and Cabrera and Vittet (1963).
- Moronoa* Kunze, error for *Morrenia*, see below.
- Morrenia Hortulanorum ex* Kunze, *Linnaea* 20: 19. 1847. (error *Moronoa*)
 T.: *Morrenia odorata* Kunze, *nom. nud.*, cited only in synonymy.
Nom. nud., cited only in synonymy of *Corynanthelium moronoa* Kunze.
 Originally monotypic.
- Mustelia* C. Sprengel, *Nachtr. I, Bot. Gart. Halle* 28. 1801.
 T.: *M. eupatoria* C. Sprengel
 Originally monotypic.
- Nardosmia* Cassini, *Dict. Sci. Nat.* 34: 186. 1825.
 L.T.: *N. denticulata* Cassini (= *Tussilago (Petasites) fragrans* Villars)
 We select the first of the three species listed by Cassini. Cassini makes special mention of the species in his introduction to the genus. Placed in the tribe Senecionideae by Bentham and Hooker (1873).
- Nothites* Cassini, *Dict. Sci. Nat.* 35: 163. 1825.
 L.T.: *N. latifolia* Cassini (= *Stevia melissaefolium* (Lamarck) Schultz-Bipontinus)
- Other things being equal we have selected as lectotype the first of the four species included by Cassini.
- Oaxacania* B. L. Robinson and J. Greenman, *Am. Jour. Sci. ser. 3.* 1: 151. 1895.
 T.: *O. malvaefolis* B. L. Robinson and J. Greenman.
 Originally monotypic.
- Ooclinium* A. P. Decandolle, *Prod.* 5: 133. 1836.
 L.T.: *O. grandiflorum* A. P. Decandolle
 We have selected as lectotype the first of the seven species listed by Decandolle.
- Ophryosporus* Meyen, *Reise* 1: 402. 1834-1835.
 T.: *O. triangularis* Meyen
 Originally monotypic.
- Orsinia Bertoloni ex* A. P. Decandolle, *Prod.* 5: 104. 1836.
 T.: *O. eupatoria* A. P. Decandolle (= *Eupatorium armanii* Balbis)
 Originally monotypic. The name is a later homonym of *Orsina* Bertoloni (*Inula*).
- Osmia* Schultz-Bipontinus, *Pollachia* 22-24: 251. 1866.
 T.: *Eupatorium odoratum* Linnaeus
 Original designation. The one species was definitely cited as the example for the genus, though innumerable other new combinations were established in the same paper.
- Oxylobus* (Mocino *ex* A. P. Decandolle) A. Gray, *Proc. Am. Acad.* 15: 25. 1879.

L.T.: *Phania trinervia* Mocino in Sesse and Mocino

Two species were included in the original section *Oxylobus* of *Phania*. The other species, *P. arbutifolia* (Humboldt, Bonpland and Kunth) A. P. Decandolle, was later restored to *Ageratum* by Bentham and Hooker (1873).

Phalacraea A. P. Decandolle, Prod. 5: 105. 1836.

T.: *P. latifolia* A. P. Decandolle

Originally monotypic.

Phania A. P. Decandolle, Prod. 5: 114. 1836.

T.: *P. multicaulis* A. P. Decandolle

The genus was originally divided into two sections with two species in section *Oxylobus* and only *P. multicaulis* in section *Euphania*.

Piptothrix A. Gray, Proc. Am. Acad. 21: 383. 1886.

T.: *P. palmeri* A. Gray

Originally monotypic.

Piqueria Cavanilles, Ic. Desc. Pl. 3: 18. 1794.

T.: *P. trinervia* Cavanilles

Originally monotypic.

Piqueriopsis R. M. King, Brittonia 17: 352. 1965.

T.: *P. michoacana* R. M. King

Originally monotypic.

Planaltoa Taubert, Engl. Jahrb. 21: 454. 1896.

T.: *P. salvifolia* Taubert

Originally monotypic.

Pleurocoronis R. M. King and H. Robinson, Phytologia 12: 468. 1966.

T.: *Hofmeisteria pluriseta* A. Gray

Original designation.

Podophania Baillon, Bull. Soc. Linn. Par. 1: 268. 1880.

T.: *P. ghiesbreghtiana* Baillon (= *Hofmeisteria dissecta* (W. J. Hooker and Arnott) R. M. King and H. Robinson)

Originally monotypic.

Praxeliopsis G. M. Barroso, Arquiv. Jard. Bot. Rio de Janeiro 9: 176. 1949.

T.: *P. mattogrossensis* G. M. Barroso

Originally monotypic.

Praxelis Cassini, Dict. Sci. Nat. 43: 261. 1826.

T.: *P. villosa* Cassini

Originally monotypic.

Psiloanthus Necker, Elem. 1: 69. 1790.

Nom. illeg. Placed in synonymy of *Liatris* J. Gaertner ex Schreber by Cassini and subsequent authors.

Radlkoferotoma Kuntz, Rev. Gen. 358. 1891.

T.: *Carelia cistifolia* Lessing

New name for *Carelia* Lessing.

Rosalesia La Llave in La Llave and Lexarza, Nov. Veg. Desc. 1: 14. 1824.

T.: *R. glandulosa* La Llave in La Llave and Lexarza (= *Brickellia cavanillesii* (Cassini) A. Gray)

Originally monotypic.

Schaetzellia Schultz-Bipontinus, Flora 33: 419. 1850.

T.: *S. mexicana* Schultz-Bipontinus

Originally monotypic. The name is a later homonym of *Schaetzellia* Klotz (*Onoseris*). For new name see *Macvaughiella* R. M. King and H. Robinson.

Sciadocephala J. Mattfeld, Notizbl. Bot. Gart. Berlin 14: 41. 1938.

T.: *S. schultze-rhonhofiae* J. Mattfeld

Originally monotypic.

Sclerolepis Cassini, Bull. Soc. Philom. 1816: 198. 1816.

T.: *Sparganophorus verticillatus* Michaux (= *Sclerolepis uniflora* (T. Walter) Porter)

Originally monotypic.

Spaniopappus B. L. Robinson, Contr. Gray Herb. n.s. 77: 45. 1926.

T.: *S. ekmanii* B. L. Robinson

Originally monotypic.

Sparganophorus S. Vaillant ex H. Crantz, Inst. 1: 261. 1766.

L.T.: *S. vaillantii* H. Crantz

The lectotype is the second cited of the two original species, but it is the one retained in the genus by Decandolle and later authors. The other species has been restored to the genus *Ethulia* as a synonym of *E. conyzoides* Linnaeus. *Sparganophorus* is placed in the tribe Vernoniaeae by Bentham and Hooker (1873).

Sphaereupatorium (O. Hoffmann) Kuntze ex B. L. Robinson, Contr. Gray Herb. n.s. 56: 24. 1920.

T.: *Eupatorium hoffmannii* (Kuntze) Kuntze ex B. L. Robinson

Originally monotypic.

Stevia Cavanilles, Ic. Desc. Pl. 4: 32. 1797.

L.T.: *S. serrata* Cavanilles

The lectotype is one of two species originally included in the genus. The typification was accomplished by Rafinesque when he removed the other species, *S. salicifolia* Cavanilles, to his new genus *Xetoligus*. Cabrera and Vittet (1963) cite *S. salicifolia* as type, but such action is considerably antedated by that of Rafinesque.

Stylotrichium J. Mattfeld, Notizbl. Bot. Gart. Berlin 8: 436. 1923.

L.T.: *Agrianthus corymbosus* A. P. Decandolle

We have selected as lectotype the older and the first listed of the two species originally included by Mattfeld (1923).

Suprago J. Gaertner, Fruct. Sem. Pl. vol. alt. 402. 1791.

L.T.: *Serratula spicata* Linnaeus (= *Liatris spicata* (Linnaeus) Willdenow)

Of the two species originally included in the genus, the first, *S. glauca* (Linnaeus) J. Gaertner, has proven to be a *Vernonia* (*V. novaboracensis* (Linnaeus) Michaux), the second, *S. spicata* (Linnaeus) J. Gaertner, is a *Liatris*. Decandolle (1836) excluded the former species and recognized *Suprago* as a section of *Liatris*. Bentham and Hooker (1873) excluded the later species instead, and recognized *Suprago* as a synonym of *Vernonia*. On the basis of Decandolle's earlier action we have recognized *Serratula spicata* Linnaeus as lectotype.

Symphyopappus Turczaninow, Bull. Soc. Nat. Mosc. 21: 583. 1848.

T.: *S. decussatus* Turczaninow

Originally monotypic.

Traganthes Wallroth, Sched. Crit. 1: 456. 1822.

L.T.: *Artemisia tenuifolia* Willdenow (= *Eupatorium capillifolium* (Lamarck) J. K. Small)

We select as lectotype the first of two species originally included by Wallroth. Wallroth did not actually make the combinations for either species that he included in *Traganthes*. The combinations were apparently first made by E. L. Greene (1903).

Trichocoronis A. Gray, Mem. Am. Acad. n.s. 4: 65. 1849.

L.T.: *T. wrightii* (Torrey and A. Gray ex A. Gray) Gray

We have selected as lectotype the older and first cited of the two species in Gray's original treatment.

Trichogonia (A. P. Decandolle) G. Gardner, Lond. Jour. Bot. 5: 459. 1846.

L.T.: *Kuhnia arguta* Humboldt, Bonpland and Kunth

We have selected as lectotype the first of the four species listed in the section *Trichogonia* of *Kuhnia* by Decandolle.

Trilisa (Cassini) Cassini, Dict. Sci. Nat. 26: 228. 1823.

T.: *Liatris odoratissima* Willdenow

Originally monotypic.

Trychinolepis B. L. Robinson, Contr. Gray Herb. n.s. 80: 6. 1928.

T.: *T. hoppii* B. L. Robinson

Originally monotypic.

Tuberostyles Steetz in Seemann, Bot. Voy. Herald 142. 1853.

T.: *T. rhizophorae* Steetz in Seemann

Originally monotypic.

Uleophytum Hieronymus, Verh. Bot. Ver. Brand. 48: 198. 1906.

T.: *U. scandens* Hieronymus

Originally monotypic.

Uncasia E. L. Greene, Leaf. Bot. Obs. Crit. 1: 13. 1903.

T.: *Eupatorium perfoliatum* Linnaeus

Original designation.

**Wikstroemia* C. Sprengel, Svensk. Vet. Akad. Handl. Stockh. 167. 1821. after May.

T.: *W. glandulosa* C. Sprengel (= *Eupatorium dalea* Linnaeus)
Originally monotypic. The name has been rejected as a homonym of *Wikstroemia* Schrader (Theaceae) May 1821, *nom. rej.*, and *Wikstroemia* Endlicher (Thymelaeaceae) *nom. cons.*

Willoughbya Necker *ex* Kuntze, Rev. Gen. Pl. 371. 1891.

T.: *Eupatorium scandens* Linnaeus (= *Mikania scandens* (Linnaeus) Willdenow)

Original designation. The name is rejected as a later homonym of *Willoughbya* (*Willughbeja*) Schreber (*Apocynaceae*) *nom. rej.*, and *Willoughbya* (*Willughbeia*) Roxburgh (*Apocynaceae*) *nom. cons.*

Xetoligus Rafinesque, New Fl. Am. 4: 74. 1836.

L.T.: *Stevia salicifolia* Cavanilles

We have selected as lectotype the older and the first listed of the two species included by Rafinesque.

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